EROSION & SEDIMENT CONTROL STANDARD NOTES

1. All erosion control measures shown on the approved plan must be in place and inspected and approved by the Loudoun County E & S inspector prior to clearing, stripping of topsoil or grading.

2. A copy of the approved erosion and sediment control plan and permit shall be kept on the site at all times.

3. The developer/developer's representative is responsible for the installation of any additional erosion control measures necessary to prevent erosion and sedimentation as determined by Loudoun County or The Town of Purcellville.

4. All disturbed areas are to drain to approved sediment control measures at all times during land disturbing activities and during site development until complete and adequate stabilization is achieved.

5. Water must be pumped into an approved filtering device during dewatering operations.

6. All erosion and sediment control practices must be constructed and maintained according to the minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook and the Virginia Regulations VR 625-02-00 Erosion and Sediment Control Regulations and to the Loudoun County and The Town of Purcellville Facility Standards Manual (FSM).

7. The developer/developer's representative will be responsible for the installation and maintenance of all erosion and sediment control practices at all times.

8. The developer/developer's representative shall inspect all erosion and sediment control measures daily and after each significant rainfall.

A. Sediment basins will be cleaned out when the level of sediment buildup reaches the cleanout elevation indicated on the riser pipe. Sediment shall be disposed in suitable areas and in such a manner that will not erode or cause sedimentation problems. The basin embankment should be checked regularly to ensure that it structurally sound and has not been damaged by erosion or construction equipment. Emergency spillways should be checked regularly to ensure that its lining is well established and erosion resistant.

B. Sediment traps will be checked regularly for sediment cleanout. Sediment shall be removed and the trap restored to its original dimensions when the sediment has accumulated to one half the design volume of the wet storage. Sediment removed from the trap shall be deposited in a suitable area and in such a manner that it will not erode and cause sedimentation problems.

C. Gravel outlets will be checked regularly for sediment buildup which will prevent drainage. If the gravel is clogged by sediment, it shall be removed and cleaned or replaced.

D. Silt fence barriers will be checked regularly for undermining or deterioration of the fabric. Sediment shall be removed when the level of sediment deposition reaches half way to the top of the barrier.

E. Seeded areas will be checked regularly to ensure that a good stand is maintained. Areas should be fertilized and reseeded as needed.

F. Stream diversion and storm conveyance channels shall be inspected daily and after each rain to ensure they're functioning properly and that the integrity of the linings are not impaired.

Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devises must be made immediately after the inspection.

9. Sediment trapping measures will be installed as a first step in grading and will be seeded and mulched immediately following installation.

10. Permanent soil stabilization shall be applied to denuded areas within seven (7) days after final grade is reached on any portion of the site.

11. Temporary soil stabilization shall be applied within seven (7) days to denuded areas that may not be at final grade but will remain undisturbed for longer than fourteen (14) days. Seeding and selection of the seed mixture shall be in accordance with the Virginia Erosion and Sediment Control Handbook Standard and Specification 3.32. Roads and parking areas shall be stabilized within seven (7) days after final grade is reached.

12. When sediment is transported onto a paved road surface, the road will be cleaned thoroughly at the end of each day. Sediment will be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing will be allowed only after sediment is removed in this manner.

13. Areas which are not to be disturbed will be clearly marked by flags, signs, etc. Tree save areas shall be clearly marked in the field.

14. No Erosion & Sediment Control Measure shall be removed without the permission of the Loudoun County E & S inspector.

MINIMUM CONSTRUCTION STANDARDS NARRATIVE

15. During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures. the contractor is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.

16. Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.

17. Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.

18. Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:
   A. No more than 500 linear feet of trench may be opened at one time.
   B. Excavated material shall be placed on the uphill side of trenches.
   C. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.
   D. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.
   E. Restabilization shall be accomplished in accordance with these regulations.
   F. Applicable safety regulations shall be complied with.

THE LOUDOUN COUNTY INSPECTOR HAS THE AUTHORITY TO ADD OR DELETE EROSION AND SEDIMENT CONTROLS IN THE FIELD AS SITE CONDITIONS WARRANT. IN ADDITION, NO SEDIMENT TRAPS OR SEDIMENT BASINS MAY BE REMOVED WITHOUT PRIOR APPROVAL OF THE COUNTY INSPECTOR.

AFTER CONSTRUCTION OPERATIONS HAVE ENDED AND ALL DISTURBED AREAS HAVE BEEN STABILIZED, MECHANICAL SEDIMENT CONTROLS SHALL BE REMOVED AND THE DETENTION BASIN MUST BE PERMANENTLY STABILIZED WITH VEGETATION UPON THE APPROVAL OF THE LOUDOUN COUNTY INSPECTOR.

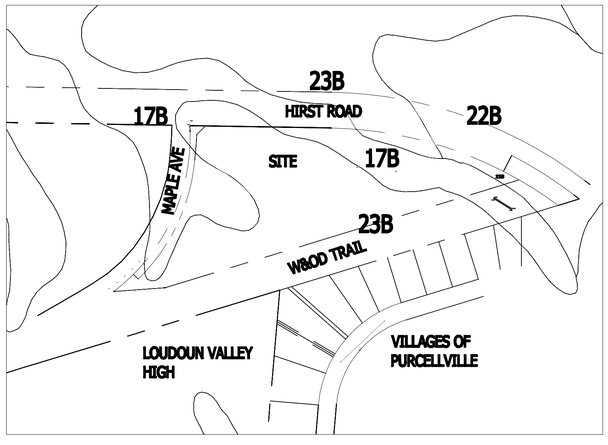
Wet Storage:		
Drainage Area to Basin	4.67	acres
Required Storage Volume (67 yds^3 x Acres)	313	Yds^3
Available Volume before Clean-out Req'd (33 yds^3 x Acres)	154	Yds^3
Elevation Corresponding to Clean-out Level	528.40	ft.
Distance from Dewatering Device Invert to Clean-out Level	1.0	ft.
Dry Storage:		
Required Storage Volume (67 yds^3 x Acres)	313	Yds^3
Total Available Storage Volume at Crest of Riser	569	Yds^3
Diameter of Dewatering Orifice	6.75	inches
Diameter of Flexible Tubing	8.75	inches
Crest of Riser Elevation	531.00	
Top of Dam Elevation	534.0	
Design High Water Elevation	532.0	
Runoff:		
Q_2 Tributary to Sediment Basin [Q=(.35)(7.27)(4.67)]	11.9	cfs
Q_{25} Tributary to Sediment Basin [Q=(.35)(8.27)(4.67)]	13.5	cfs
Principal Spillway Design:		
Upstream Invert of Outfall Pipe	527.75	ft
Downstream Invert of Outfall Pipe	526.50	ft
Length of Outfall Pipe	52	ft
Slope on the Outfall Pipe	2.43%	
Diameter of CMP Outfall Pipe	18	inch
Capacity of CMP Outfall Pipe [Q=(1.49AR$^{2/3}$S$^{1/2}$]/n	44.6	cfs
Diameter of CMP Riser	27	inch
Head on the Riser for Q_2 [H = (Q_2/(9.739D))$^{2/3}$	1.00	ft
Head on the Riser for Q_{25} [H = Q_{25}/(3.782D^2)	0.70	ft
Total Head Available	5.50	ft
Dewatering Device Design:		
Total Dry Storage Available, S	15,369	ft^3
Find Discharge, Q where Q = S/21,600 seconds	0.71	cfs
Orifice Area, A = Q/(64.32xh)$^{1/2}$x(0.6)	0.2437	ft^2
Minimum Diameter of Dewatering Orifice	6.686	inches
Use Minimum Diameter to prevent clogging	3	inches
Diameter of Drainage Tubing	5	inches

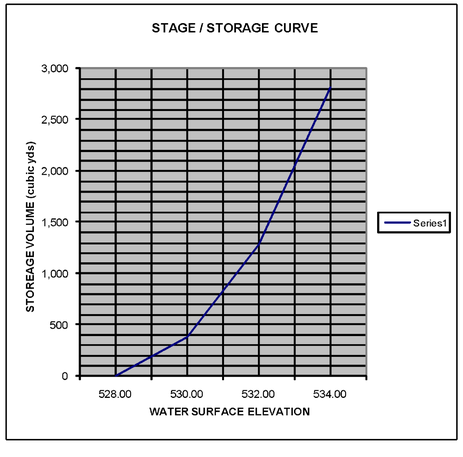
SOILS TYPES

MAPPING UNIT	NAME	PERMEABILITY	DESCRIPTION
17B	MIDDLEBURG SILT	B	VERY DEEP, WELL DRAINED YELLOWISH-BROWN TO BROWN LOAMY SOILS WITH INTERMITTENT SEASONAL WATER TABLES IN CONCAVE UPLAND POSITIONS (SWALES); DEVELOPED IN RECENT COLLUVIUM OF SOILS DERIVED FROM MIXED ACID AND BASIC ROCK
22B	PURCELLVILLE SWAMPOODLE COMPLEX	D	COMPLEX OF VERY DEEP, WELL DRAINED YELLOWISH- RED SILTY PURCELLVILLE AND VERY DEEP MODERATELY WELL DRAINED, STRONG BROWN AND MOLTED STRONG BROWN AND GRAY SILTY SWAMPOODLE SOILS IN BROAD, NEARLY LEVEL TO CONCAVE UPLAND POSTIONS; DEVELOPED IN RESIDUUM WEATHERED FROM MIXED GRANITE GNEISS AND METADIABASE ROCK
23B	PURCELLVILLE SILT LOAM	B	VERY DEEP, WELL DRAINED YELLOWISH-RED SILTY TO LOAMY SOIL ON UNDULATING AND GENTLY SLOPING UPLANDS; DEVELOPED IN RESIDUUM WEATHERED FROM MIXED GRANITE GNEISS AND METADIBASE

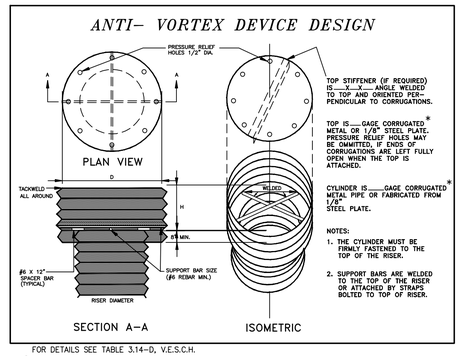
SOIL NOTES:
MIDDLEBURG SILT LOAM IS CLASSIFIED AS A CLASS III SOIL
PER LOUDOUN COUNTY MAPPING AND DESCRIBED AS POOR POTENTIAL SHORT DURATION WATER TABLES.
NO OTHER SOIL GROUPS ONSITE ARE CLASSIFIED AS III OR IV.

SOILS MAP
SCALE 1"=200'



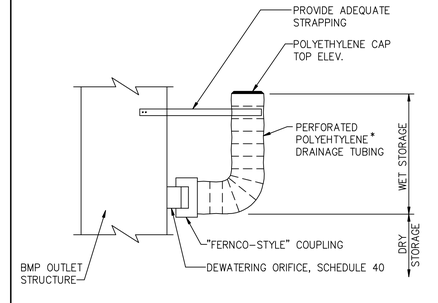


ANTI- VORTEX DEVICE DESIGN



FOR DETAILS SEE TABLE 3.14-D, V.E.S.C.H.
* FOR ANTI VORTEX DESIGN SEE SEDIMENT BASIN DESIGN SUMMARY.

RECOMMENDED DEWATERING SYSTEM FOR SEDIMENT BASINS



*DRAINAGE TUBING SHALL COMPLY WITH ASTM F667 AND AASHTO M294

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PURCELLVILLE FIRE AND RESCUE

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PURCELLVILLE, VIRGINIA

EROSION & SEDIMENT CONTROL DETAILS

KEY PLAN
N

REVISIONS:

ISSUES:
09-26-07 BID SET

STAMP AND SEAL:

DATE: 09-26-07
SCALE: AS NOTED
PROJECT NO. 0611
SHEET: C-118